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Technical Report

**3rd Generation Partnership Project;
Technical Specification Group (TSG) RAN3;**

**Hybrid ARQ Type II/III Iub/Iur aspects
(Release 2000)**



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Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
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 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

Introduction

1 Scope

The purpose of the present document is to gather all information concerning the impacts of Hybrid ARQ Type II/III on RAN WG3.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

- [1] TR 25.835: "Report on hybrid ARQ type II/III" (TSG RAN WG2).
- [2] TS 25.423: "UTRAN Iur Interface RNSAP Signalling".
- [3] TS 25.425: "UTRAN Iur Interface User Plane Protocols for Common Transport Channel Data Streams".
- [4] TS 25.427: "UTRAN Iub/Iur Interface User Plane Protocol for DCH Data Streams".
- [5] TS 25.433: "UTRAN Iub Interface NBAP Signalling".
- [6] TS 25.435: "UTRAN Iub Interface User Plane Protocols for Common Transport Channel Data Streams".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

3.2 Symbols

No special symbols are defined in the present document.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3G TS 22.101 apply.

4 Hybrid ARQ type II/III general aspects

4.1 Function split

This section gives a general overview of function split for hybrid ARQ type II/III between the UTRAN components.

4.2 Protocol Architecture

This presents the protocol architecture assumed for Hybrid ARQ type II/III. For details, a reference to [1] is given.

5 Application 1: Hybrid ARQ type II/III in downlink on DCH

5.1 Introduction

This section describes the application of Hybrid ARQ II/III on downlink Dedicated Transport Channels (DCH).

This is applicable to both FDD and TDD.

5.2 Requirements

The requirements for the Iub/Iur interface protocols depend on the selected radio interface solution for Hybrid ARQ II/III, see [1].

5.3 Study areas

5.4 Agreements and associated contributions

5.5 Specification impact

It is expected that hybrid ARQ type II has impacts on the following specifications:

25.427 (DCH Frame Protocol) [4], 25.433 (NBAP) [5], 25.423 (RNSAP) [2].

5.6 Backward compatibility

5.7 Open issues

6 Application 2: Hybrid ARQ type II/III in uplink on DCH

6.1 Introduction

This section describes the application of Hybrid ARQ II/III on uplink Dedicated Transport Channels (DCH).

This is applicable to both FDD and TDD.

6.2 Requirements

The requirements for the Iub/Iur interface protocols depend on the selected radio interface solution for Hybrid ARQ II/III, see [1].

6.3 Study areas

6.4 Agreements and associated contributions

6.5 Specification impact

It is expected that hybrid ARQ type II has impacts on the following specifications:

25.427 (DCH Frame Protocol) [4], 25.433 (NBAP) [5], 25.423 (RNSAP) [2].

6.6 Backward compatibility

6.7 Open issues

7 Application 3: Hybrid ARQ type II/III in downlink on TDD DSCH

7.1 Introduction

This section describes the application of Hybrid ARQ II/III on a DSCH in the TDD mode – which includes two cases: the DSCH in Cell_DCH and in Cell_FACH state of the UE.

7.2 Requirements

The requirements for the Iub/Iur interface protocols depend on the selected radio interface solution for Hybrid ARQ II/III, see [1].

7.3 Study areas

7.4 Agreements and associated contributions

7.5 Specification impact

It is expected that hybrid ARQ type II/III has impacts on the following specifications:

25.435 (DSCH Frame Protocols on Iub) [6], 25.425 (DSCH Frame Protocols on Iur) [3], 25.433 (NBAP) [5], 25.423 (RNSAP) [2].

7.6 Backward compatibility

7.7 Open issues

8 Application 4: Hybrid ARQ type II/III in downlink on FDD DSCH

8.1 Introduction

This section describes the application of Hybrid ARQ II/III on a DSCH in the FDD mode – where the application of the DSCH requires the UE to be in the Cell_DCH state, i.e. a DCH exists in parallel.

8.2 Requirements

The requirements for the Iub/Iur interface protocols depend on the selected radio interface solution for Hybrid ARQ II/III, see [1].

8.3 Study areas

8.4 Agreements and associated contributions

8.5 Specification impact

It is expected that hybrid ARQ type II/III has impacts on the following specifications:

25.435 (DSCH Frame Protocols on Iub) [6], 25.425 (DSCH Frame Protocols on Iur) [3], 25.433 (NBAP) [5], 25.423 (RNSAP) [2].

8.6 Backward compatibility

8.7 Open issues

9 Application 5: Hybrid ARQ type II/III on USCH

9.1 Introduction

This section describes the application of Hybrid ARQ II/III on a USCH in the TDD mode.

9.2 Requirements

9.3 Study areas

9.4 Agreements and associated contributions

9.5 Specification impact

It is expected that hybrid ARQ type II/III has impacts on the following specifications:

25.435 (USCH Frame Protocols on Iub) [6], 25.425 (USCH Frame Protocols on Iur) [3], 25.433 (NBAP) [5], 25.423 (RNSAP) [2].

9.6 Backward compatibility

9.7 Open issues

10 Project Plan

11 History

Document history		
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